

# Hybrid Mobile Applications - ICD0018

TalTech IT College, Andres Käver, 2021-2022, Fall semester

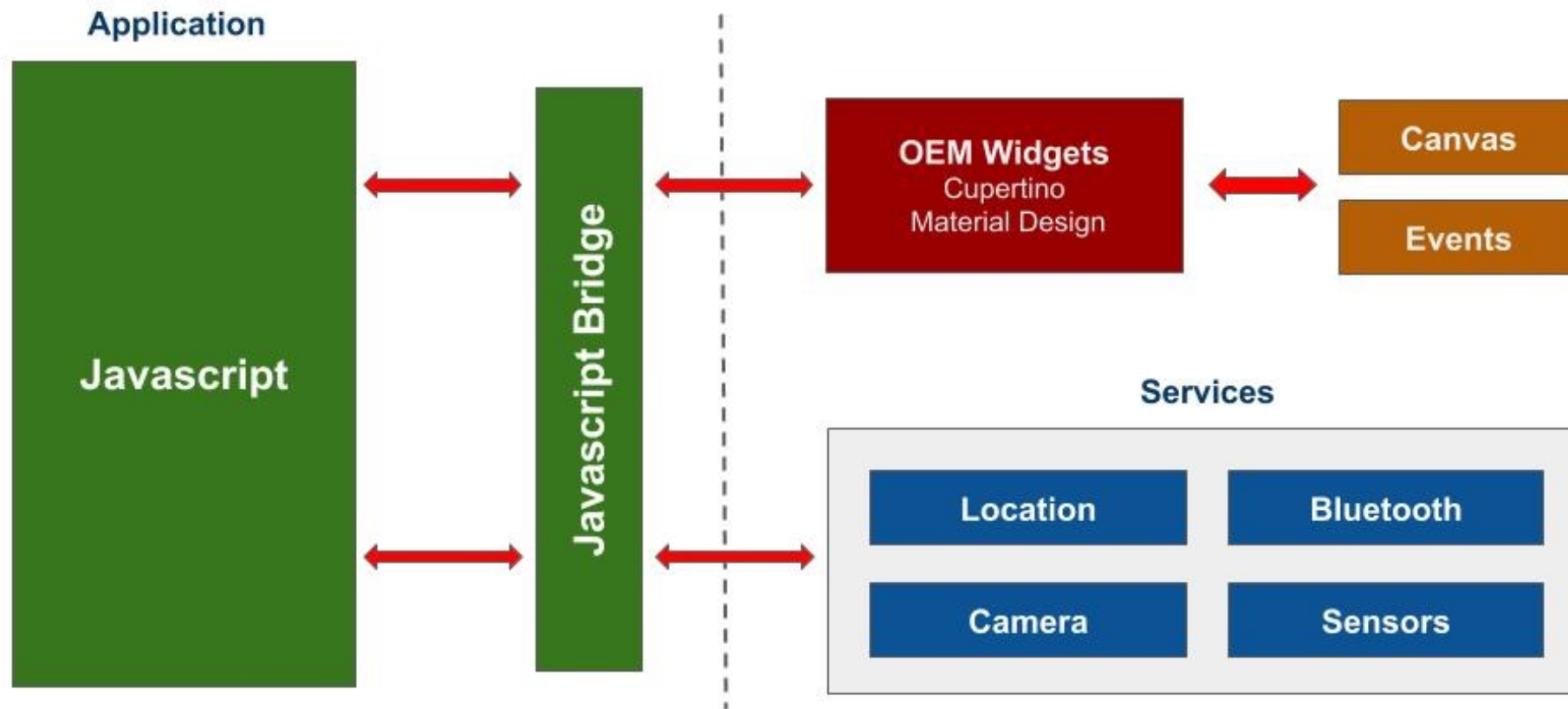
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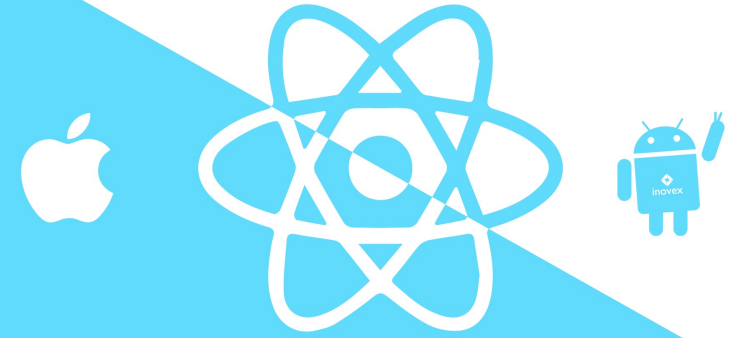
# React Native

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## Reactive Views



# React N



- ▶ Initial release: 2015
- ▶ Facebook and community
- ▶ Open source project - <https://github.com/facebook/react-native>
- ▶ Under active development, release branch every two weeks
- ▶ Currently ver 0.6X

- ▶ React Native is like React, but it uses native components instead of web components as building blocks.
- ▶ UI is rendered using platform native components - buttons, lists, navigation view, etc.
- ▶ Uses the same concepts, as React – JSX, components, state, props.
- ▶ Main language is JS – ES2015/ES6

# React N – Hello, world!

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```
import React, { Component } from 'react';
import { Text, View } from 'react-native';

export default class HelloWorldApp extends Component {
  render() {
    return (
      <View style={{ flex: 1, justifyContent: "center",
alignItems: "center" }}>
        <Text>Hello, world!</Text>
      </View>
    );
  }
}
```

# React N – installation

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- ▶ Two ways to start development – Expo or CLI
- ▶ Expo – more handholding, less components, less possibilities, for newcomers. Requires only Node.
- ▶ CLI – full experience, somewhat complicated. Requires lots of external tooling.

# React N - CLI

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- ▶ macOS
  - ▶ Node, Watchman, CLI, JDK, Android Studio, Xcode for iOS
- ▶ Windows
  - ▶ Node, CLI, Python2, JDK, Android Studio
- ▶ Linux
  - ▶ Node, CLI, JDK, Android Studio
- ▶ Find exact instructions at
  - ▶ <https://reactnative.dev/docs/getting-started>
  - ▶ <https://reactnative.dev/docs/environment-setup> (CLI for this course)

# React N – First Project

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- ▶ Init project

- > npx react-native init RNTTest01

- ▶ Run it

- > cd RNTTest01

- > npx react-native start

- > npx react-native run-android

- > npx react-native run-ios



# React N - IDE

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- ▶ VS Studio Code
  - ▶ React Native Tools

[https://marketplace.visualstudio.com/items?itemName=vsmobile.vscod  
e-react-native](https://marketplace.visualstudio.com/items?itemName=vsmobile.vscod<br/>e-react-native)

<https://github.com/microsoft/vscode-react-native>

# React N - TypeScript

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- ▶ Lets create a project:

```
> npx react-native init RNTes02 --template react-native-template-typescript
```

# React N – Basic TS app

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```
import React from 'react';
import { Hello } from './components/Hello';

const App = () => {
  return <Hello name="Andres" />;
};

export default App;
```

# React N – component (class)

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```
import React from 'react';
import { StyleSheet, Text, View } from 'react-native';

export interface Props {
  name: string;
}

export class Hello extends React.Component<Props> {
  constructor(props: Props) {
    super(props);
  }

  render() {
    return (
      <View style={styles.root}>
        <Text
          style={styles.greeting}>Hello, {this.props.name}!</Text>
        </View>
      );
  }
}
```

```
const styles = StyleSheet.create({
  root: {
    flex: 1,
    justifyContent: 'center',
    alignItems: 'center',
  },
  greeting: {
    color: '#999',
    fontWeight: 'bold',
  },
});
```

# Document formatting

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## ► .prettierrc.js

```
module.exports = {  
  bracketSpacing: true,  
  jsxBracketSameLine: true,  
  singleQuote: true,  
  trailingComma: 'all',  
  tabWidth: 4,  
  useTabs: false,  
};
```

# React N

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▶ THE END!